

Applic. No.: 09/994,195

Amdt. Dated October 31, 2005

Reply to Office action of July 27, 2005

REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 1-13 and 16-19 remain in the application. Claims 1 and 8 have been amended. Claims 14-15 have been previously cancelled.

In item 1 on pages 2-3 of the above-mentioned Office action, claims 1, 3-5, and 7 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over O'Tool et al. (6,696,879 B1) and Maclellan et al. (US 5,940,006).

In item 2 on page 3 of the above-mentioned Office action, claims 8, 10-13, and 16-17 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over O'Tool et al. and Maclellan et al. and further in view of Barham et al. (US 5,432,813).

In item 3 on page 4 of the above-mentioned Office action, claims 2 and 9 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over O'Tool et al., Maclellan et al., and Barham et al. and further in view of Anderson (US 4,868,915).

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In item 4 on page 4 of the above-mentioned Office action, claims 6 and 19 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over O'Tool et al., Maclellan et al., and Barham et al. and further in view of Lanzi (US 6,353,406).

In item 5 on page 5 of the above-mentioned Office action, claim 18 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over O'Tool et al. and Maclellan et al. and further in view of Tu et al. (US 5,682,403).

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and the claims have, therefore, not been amended to overcome the references. However, the language of the claims has been amended in an effort to even more clearly define the invention of the instant application.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claim 1 calls for, inter alia:

outputting with the transceiver unit the interrogation signal configured to activate all the access code transmitters within a reception area at the same time;

transmitting with all of the access code transmitters receiving the interrogation signal a respectively

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specific access code signal superimposed with a specific spread spectrum sequence, substantially simultaneously; and

receiving the access code signals with the transceiver unit substantially simultaneously, and parallel processing and separating the access code signals on a basis of specific spread spectrum sequences applied to the signals for speeding up the process and guaranteeing a higher security against interception.

Claim 8 calls for, inter alia:

a transceiver unit having:

an interrogation signal transmitter for generating and transmitting an interrogation signal configured to activate all access code transmitters within a reception area at the same time; and

a receiver for receiving access code signals simultaneously, said receiver having at least one section with a device for parallel processing and separating of a plurality of simultaneously received access code signals in accordance with specific spread spectrum sequences superimposed on the access code signals for speeding up the process and guaranteeing a higher security against interception;

...

said plurality of access code transmitters each being a portable code transmitter with a transponder or a sending and receiving unit, and said plurality of access code transmitters transmitting the superimposed access code signals substantially simultaneously.

As described on page 7, lines 15-22 of the specification of the instant application, the basic concept of the invention of the instant application is to allow both phases of the communication process between the vehicle unit (the transceiver unit) and the access code transmitters to take

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place in parallel. That is, the access code transmitters are addressed by a common interrogation signal and they respond at the same time with their transmission signals having a specific spread spectrum sequence applied to them, which allows them to be processed in parallel in the vehicle unit.

This concept is not disclosed by any of the cited references or any combination thereof.

As already discussed in the previous response, in O'Tool et al., when more than one transponder responds to the query at the same time, the transceiver receives "garbled" information (see column 90, line 31 of O'Tool et al.). When replies from multiple transponders are received, a so-called "arbitration" procedure will be carried out to isolate one single device (see column 90, lines 32-34 of O'Tool et al.). The "arbitration" procedure as described in O'Tool et al. is evidently a sequential procedure. In other words, the received access code signals are not processed and separated simultaneously, as recited in claims 1 and 8 of the instant application.

Further, it is noted that although spread spectrum sequences are used in O'Tool et al., they merely serve to provide information for the "arbitration" scheme, not to facilitate

parallel processing. It is also noted that in O'Tool et al. the spread spectrum sequences are not superimposed to the access code signals unless the interrogator demands so. In contrast, in the invention of the instant application, a specific spread spectrum sequence is superimposed to each access code signal before the access code signals are transmitted to the vehicle unit simultaneously.

MacLellan et al. disclose a radio communication system with an interrogator and a number of tags. The interrogator sends a first radio signal to the tags and each tag receives and transmits, in a time-slotted manner, a second modulated signal back to the interrogator (see the abstract of MacLellan et al.). Clearly, in MacLellan et al. the second modulated signals are not transmitted by the transponders or received by the transceiver simultaneously. Therefore, it is impossible for MacLellan et al. to separate a plurality of simultaneously received signals, as recited in the claims of the instant application.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 1 and 8. Claims 1 and 8 are, therefore, believed to be patentable over the art and

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since all of the dependent claims are ultimately dependent on claims 1 or 8, they are believed to be patentable as well.


In view of the foregoing, reconsideration and allowance of claims 1-13 and 16-19 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made. Please charge any fees which might be due with respect to 37 CFR Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,

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